Release notes for ENDF/B Development n-059_Pr_143 evaluation



April 26, 2017

- checkr Warnings:
 - 1. A previous error halted parsing of the current section $MAT=5931,\ MF=1,\ MT=451\ (1)$: Parsing stopped

ERROR(S) FOUND IN MAT=5931, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 238 TO 291

- checkr Errors:
 - 1. A variable is outside the allowed ENDF range MAT=5931, MF=1, MT=451 (0): Variable range

ERROR(S) FOUND IN MAT=5931, MF= 1, MT=451
MOD = 1 OUT OF RANGE 0 - 0 RECORD NUMBER 238

2. Missing a section in directory so your directory is messed up. This error will break everything else $MAT=5931,\ MF=2,\ MT=151\ (0)$: Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY RECORD NUMBER 293

3. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=3, MT=1 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY RECORD NUMBER 623

4. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=3, MT=2 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY RECORD NUMBER 650

5. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=3, MT=4 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY RECORD NUMBER 676

6. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=3, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY RECORD NUMBER 694

7. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=3, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 17 SECTION 3/ 17 NOT IN DIRECTORY

RECORD NUMBER

8. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 22 SECTION 3/ 22 NOT IN DIRECTORY

RECORD NUMBER 712

9. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 28 SECTION 3/ 28 NOT IN DIRECTORY

RECORD NUMBER

728

10. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 32 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 32 SECTION 3/ 32 NOT IN DIRECTORY

RECORD NUMBER 740

11. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 33 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 33 SECTION 3/ 33 NOT IN DIRECTORY

RECORD NUMBER

12. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 51 SECTION 3/51 NOT IN DIRECTORY

RECORD NUMBER

758

13. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 52 SECTION 3/52 NOT IN DIRECTORY

RECORD NUMBER 776

14. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 53 SECTION 3/53 NOT IN DIRECTORY

RECORD NUMBER 791

15. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 54 SECTION 3/54 NOT IN DIRECTORY

RECORD NUMBER 806

16. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 55 SECTION 3/55 NOT IN DIRECTORY

RECORD NUMBER 820

17. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 56 SECTION 3/56 NOT IN DIRECTORY

RECORD NUMBER 834

18. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 57 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 57 SECTION 3/57 NOT IN DIRECTORY

RECORD NUMBER 847

19. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 58 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 58 SECTION 3/ 58 NOT IN DIRECTORY

RECORD NUMBER

20. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 59 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 59 SECTION 3/59 NOT IN DIRECTORY

RECORD NUMBER 871

21. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 60 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 60 SECTION 3/ 60 NOT IN DIRECTORY

RECORD NUMBER 882

22. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 3, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT= 91 SECTION 3/91 NOT IN DIRECTORY

RECORD NUMBER 893

23. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 102 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT=102 SECTION 3/102 NOT IN DIRECTORY

RECORD NUMBER 903

24. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 103 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT=103 SECTION 3/103 NOT IN DIRECTORY

RECORD NUMBER 924

25. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 104 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT=104 SECTION 3/104 NOT IN DIRECTORY

RECORD NUMBER 939

26. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 105 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT=105 SECTION 3/105 NOT IN DIRECTORY

RECORD NUMBER 952

27. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 3, MT = 106 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT=106 SECTION 3/106 NOT IN DIRECTORY

RECORD NUMBER 965

28. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=3, MT=107 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 3, MT=107 SECTION 3/107 NOT IN DIRECTORY

RECORD NUMBER 976

29. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 4, MT = 2 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 2 SECTION 4/ 2 NOT IN DIRECTORY

RECORD NUMBER 993

30. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=4, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 16 SECTION 4/ 16 NOT IN DIRECTORY

RECORD NUMBER 1168

31. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=4, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 17 SECTION 4/ 17 NOT IN DIRECTORY

RECORD NUMBER

32. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 4, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 22 SECTION 4/ 22 NOT IN DIRECTORY

RECORD NUMBER 1190

33. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 4, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 28 SECTION 4/ 28 NOT IN DIRECTORY

RECORD NUMBER 1201

34. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 4, MT = 32 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 32 SECTION 4/ 32 NOT IN DIRECTORY

RECORD NUMBER 1212

35. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 4, MT = 33 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 33 SECTION 4/ 33 NOT IN DIRECTORY

RECORD NUMBER 1223

36. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 4, MT = 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 51 SECTION 4/51 NOT IN DIRECTORY

RECORD NUMBER 1234

37. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 4, MT = 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 52 SECTION 4/ 52 NOT IN DIRECTORY

RECORD NUMBER 1262

38. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 4, MT = 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 53 SECTION 4/53 NOT IN DIRECTORY

RECORD NUMBER 1290

39. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 5931, MF = 4, MT = 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 54 SECTION 4/ 54 NOT IN DIRECTORY

RECORD NUMBER 1318

40. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 4, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 55 SECTION 4/ 55 NOT IN DIRECTORY

RECORD NUMBER 1346

41. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 4, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 56 SECTION 4/ 56 NOT IN DIRECTORY

RECORD NUMBER 1371

42. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 4, MT = 57 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 57 SECTION 4/ 57 NOT IN DIRECTORY

RECORD NUMBER 1398

43. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=4, MT=58 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 58 SECTION 4/ 58 NOT IN DIRECTORY

RECORD NUMBER 1422

44. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=4, MT=59 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 59 SECTION 4/ 59 NOT IN DIRECTORY

RECORD NUMBER 1446

45. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=4, MT=60 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 60 SECTION 4/ 60 NOT IN DIRECTORY

RECORD NUMBER 1470

46. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=4, MT=91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 4, MT= 91 SECTION 4/ 91 NOT IN DIRECTORY

RECORD NUMBER 1493

47. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=5, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 5, MT= 16 SECTION 5/ 16 NOT IN DIRECTORY

RECORD NUMBER 1518

48. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 5, MT = 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 5, MT= 17 SECTION 5/ 17 NOT IN DIRECTORY

RECORD NUMBER 1587

49. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=5, MT=22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 5, MT= 22 SECTION 5/ 22 NOT IN DIRECTORY

RECORD NUMBER 1630

50. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=5, MT=28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 5, MT= 28

SECTION 5/ 28 NOT IN DIRECTORY

RECORD NUMBER 1875

51. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 5931, MF = 5, MT = 32 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 5, MT= 32 SECTION 5/ 32 NOT IN DIRECTORY

RECORD NUMBER 2017

52. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=5, MT=33 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 5, MT= 33 SECTION 5/ 33 NOT IN DIRECTORY

RECORD NUMBER 2085

53. Missing a section in directory so your directory is messed up. This error will break everything else MAT=5931, MF=5, MT=91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5931, MF= 5, MT= 91 SECTION 5/ 91 NOT IN DIRECTORY

RECORD NUMBER 2158

- psyche Warnings:
 - 1. Strength function in URR not in agreement with PSYCHE's expectations FILE 2 / SECTION 151 / ISOTOPE MASS = 143. L=0 / STRENGTH FUNCTION IS 4.58094E-03 / STRENGTH FUNCTION 4.58094E-03 / LIES OUTSIDE LIMITS 1.00000E-04 TO 6.00000E-04 (0): URR str. ftn.

FILE 2

SECTION 151

ISOTOPE MASS = 143. L = 0

STRENGTH FUNCTION IS 4.58094E-03

STRENGTH FUNCTION 4.58094E-03

... [1 more lines]

• fudge-4.0 Warnings:

1. Missing a channel with a particular angular momenta combination resonances / resolved / MultiLevel_BreitWigner (Error # 0): missingResonanceChannel

WARNING: Missing a channel with angular momenta combination L = 0, J = 2.0 and S = 2.0 for "capture"

2. Potential scattering hasn't converted, you need more L's! resonances / resolved (Error # 1): potentialScatteringNotConverged

WARNING: Potential scattering hasn't converged by L=0 at E=375.0 eV, xs[0]/xs[0]=100.0% > 0.1%

3. Cross section does not match sum of linked reaction cross sections $crossSectionSum\ label\ 0:\ total\ (Error\ \#\ 0):\ CS\ Sum.$

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.40%

4. Cross section does not match sum of linked reaction cross sections $crossSectionSum\ label\ 1:\ (z,n)\ (Error\ \#\ 0):\ CS\ Sum.$

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.14%

• fudge-4.0 Errors:

1. Calculated and tabulated Q values disagree. reaction label 12: n[multiplicity:'2'] + Pr142 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -7487782.2474823 eV vs -7.3511e6 eV!

2. Calculated and tabulated Q values disagree. reaction label 13: n[multiplicity:'3'] + Pr141 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -13330931.45127869 eV vs -1.31992e7 eV!

3. Calculated and tabulated Q values disagree. reaction label 14: n + H1 + Ce142 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -5959680.543182373 eV vs -5823630. eV!

4. Calculated and tabulated Q values disagree. reaction label 15: n + H2 + Ce141 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10904806.18133545 eV vs -1.06866e7 eV!

5. Calculated and tabulated Q values disagree. reaction label 16: n + H3 + Ce140 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10075716.69625854 eV vs -9934580. eV!

6. Calculated and tabulated Q values disagree. reaction label 17: Pr144 + gamma~(Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 5617773.092376709 eV vs 5756390. eV!

7. Calculated and tabulated Q values disagree. reaction label 18: n + He4 + La139 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 1597266.04119873 eV vs 1744090. eV!

8. Calculated and tabulated Q values disagree. reaction label 19: H1 + Ce143_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -814842.618637085 eV vs -672533. eV!

9. Calculated and tabulated Q values disagree. reaction label 20: H2 + Ce142-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -3735114.442245483 eV vs -3513510. eV!

10. Calculated and tabulated Q values disagree. reaction label 21: $H3 + Ce141_s$ (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -4647573.240722656 eV vs -4501460. eV!

11. Calculated and tabulated Q values disagree. reaction label 22: He3 + La141-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -7130865.082763672 eV vs -6912830. eV!

12. Calculated and tabulated Q values disagree. reaction label 23: He4 + La140-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 6758243.963088989 eV vs 6.9092e6 eV!

• njoy2012 Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 16 only mf4/mf5 provided

2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 17 only mf4/mf5 provided

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 22 only mf4/mf5 provided

- 4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 28 only mf4/mf5 provided
- 5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
 - groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 32 only mf4/mf5 provided
- 6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (5): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 33 only mf4/mf5 provided
- 7. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

 groupr...compute self-shielded group-averaged cross-sections (6): GROUPR/conver (0)
 - ---message from conver---cannot do complete particle production for mt= 91 only mf4/mf5 provided